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48. ***Cordulegaster obliquus*** (supposition).

Selys Monogr. Gomphin. p. 349.

One male nymphæ skin by Boll from Dallas, Texas, in McLachlan's collection. Length 44 mm.

The only nympha is not in very good condition; similar to *C. annulatus*, but the head partly broken; the mask narrower; the abdomen broadest in the middle, longer; segments 8 and 9 with a short, straight lateral spine; appendages not full twice as long as 10, tip sharp, very little incurved; the middle one shorter than the inferiors; lateral ones as in *C. annulatus*.

As Mr. McLachlan has received from Boll the imago of *C. obliquus* from Dallas, and as this species is at present the only one known from Texas, the supposition seems very probable. The description will be more detailed when complete specimens are at hand.

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## A Bibliographical and Synonymical Catalogue of the North American CYNIPIDÆ, with description of new species.

BY WILLIAM H. ASHMEAD.

Jacksonville, Florida.

(Paper No. 6.)

My aim in presenting this Catalogue of the North American Cynipidæ, is to show our present knowledge of the forms of this interesting hymenopterous family; to bring together all the described North American species, and to place them as far as possible in their proper genera, so that they may the more readily be identified.

The arrangement of the genera of the *phytophagous* Cynipidæ, is that proposed by Dr. Gustav Mayr, in his "*Die Genera der gallenbewohnenden Cynipiden*," with the exception that I have thought it advisable to still continue to separate the *Psenidæ* from the *Inquilinæ*.

The classification of the *parasitic* Cynipidæ is still very imperfect and will require a thorough revision.

It is hoped, however, that the list of the described North American forms here given for the first time, will induce students to pay more attention to their collection, so that larger and better series may be collected and thus enable a more satisfactory classification to be made in the near future.

In an appendix the new species will be found described.

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## CATALOGUE.

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### CYNIPIDÆ.

Division I.—PSENIDÆ, or True Gall-makers.

#### DRYORHIZOXENUS. Ashmead.

*Belonocnema*, Mayr.

*floridanus*, Ashm. Proc. Ent. Soc. 1881, p. xxv.

*Belonocnema Theatæ*, Mayr. Die Gen. d. Gallenbw. Cynip. p. 16.

#### RHODITES, Hartig.

*dichlocerus*, Harris (*Cynips*) Ins. Mass. 3d Ed. p. 549; (*Rhodites*) Osten Sacken Proc. Ent. Soc. Phil. vii, p. 42.

*bicolor*, Harris (*Cynips*) l. c. p. 548; (*Rhodites*) Osten Sacken l. c. p. 49.

*ignota*, O. S. l. c. p. 49.

*rosæ*, Linn. (*Cynips*) Sys. Nat. ii, 917; (*Rhodites*) Hartig Zeitschr. f. d. Ent. ii, 1840 p. 194.

*radicum*, O. S. l. c. (ante) p. 46.

*verna*, O. S. l. c. p. 49.

**DIASTROPHUS**, Hartig.

*nebulosus*, O. S. l. c. p. 36.

*cuscutaeformis*, O. S. l. c. p. 39.

*radicum*, Bass. Can. Ent. vol. ii, p. 98.

*turdigus*, Bass. l. c. p. 99.

*potentillæ*, Bass. Proc. Ent. Soc. Phil. iii, p. 689.

*similis*, Bass. Can. Ent. vol. xiii, p. 19.

**ANTISTROPHUS**, Walsh.

*pisum*, Walsh, Am. Ent. vol. ii, p. 74.

**TRIBALIA**, Walsh.

*batatorum*, Walsh, Proc. Ent. Soc. Phil. iii, p. 470.

**AMPHIBOLIPS**, Reinhard.

*spongifica*, O. S. (*Cynips*) Proc. Ent. Soc. Phil. ii p. 244.

*cocciniæ*, O. S. l. c. p. 242.

*nubilipennis*, Harris (*Cynips*) Ins. Inj. Veg. p. 434; Fitch Rep. 2nd, No. 318.

*inanis*, O. S. (*Cynips*) l. c. ante i, p. 61.

*coelebs*, O. S. (*Cynips*) l. c. p. 61.

*ilicifoliæ*, Bass. (*Cynips*) l. c. iii, p. 682.

*formosa*, Bass. (*Cynips*) l. c. p. 679.

*sculpta*, Bass. (*Cynips*) l. c. ii, p. 324.

*phellos*, O. S. (*Cynips*) l. c. i, p. 70.

*cinerea*, Ashm. (*Cynips*) Proc. Ent. Soc. 1881, p. xix.

*racemaria*, Ashm. (*Cynips*) l. c. p. xxvi.

*citriformis*, Ashm. (*Cynips*) l. c. p. xxviii.

*fuliginosa*, Ashm. (*Cynips*) l. c. 1885, p. vii.

*melanocera*, n. sp.

**ANDRICUS**, Hartig.

S. G. *CALLIRHYTIS*, Förster.

*agrifoliæ*, Bass. (*Cynips*) Can. Ent. vol. xiii, p. 53.

*Suttoni*, Bass. (*Cynips*) l. c. p. 54.

*californicus*, Bass. (*Cynips*) l. c. p. 51.

*capsula*, Bass. (*Cynips*) l. c. p. 101.

*conigerus*, O. S. (*Cynips*) Proc. Ent. Soc. Phila. ii, p. 251, vol. v, p. 358.

*seminator*, Harris (*Cynips*) Ins. Inj. Veg. p. 548; Fitch, Rep. 2d N. Y. State Agr. Soc. p. 315.

*similis*, Bass. (*Cynips*) Proc. Ent. Soc. Phila. iii, p. 685.

*futilis*, O. S. (*Cynips*) l. c. pp. 63-64.

*tumifica*, O. S. (*Cynips*) l. c. v, p. 683.

*scitula*, Bass. (*Cynips*) l. c. iii, p. 683.

*clavula*, Bass. (*Cynips*) l. c. p. 685.

*operator*, O. S. (*Cynips*) l. c. ii, pp. 256-57.

*palustris*, O. S. (*Cynips*) l. c. i, p. 63.

*nigræ*, O. S. (*Cynips*) l. c. i, p. 66.

*tuber*, Fitch (*Cynips*) Rep. 2d N. Y. State Agr. Soc. p. 309; Bassett, Proc. Ent. Soc. Phila. iii, p. 685.

*modesta*, O. S. (*Cynips*) l. c. i, p. 66.  
*notha*, O. S. (*Cynips*) l. c. p. 58.  
*podagræ*, Walsh (*Cynips*) Proc. Ent. Soc. iii, p. 492.  
*futilis*, O. S. (*Cynips*) l. c. i, pp. 63-64.  
*papillatus*, O. S. (*Cynips*) l. c. p. 64.  
*quercifoliæ*, n. sp.

S. G. *ANDRICUS*, Hartig.

*tubicola*, O. S. (*Cynips*) Proc. Ent. Soc. i, p. 60.  
*singularis*, Bass. (*Cynips*) l. c. ii, p. 326; Walsh, vol. ii, p. 485.  
*Osten Sackenii* Bass. (*Cynips*) l. c. p. 327.  
*ventricosus*, Bass. (*Cynips*) l. c. iii, p. 681.  
*lana*, Fitch (*Cynips*) Fifth Report. No. 316.  
*confluens*, Harris (*Cynips*) Ins. Inj. Veg. p. 433; O. S. Proc. Ent. Soc. i, p. 57.  
*petiolicola*, Bass. (*Cynips*) Proc. ii, p. 325.  
*fusiformis*, O. S. (*Cynips*) l. c. i, p. 61.  
*flocci*, Walsh (*Cynips*) l. c. vol. iv, p. 482.  
*ignotus*, Bass. (*Cynips*) Can. Ent. vol. xiii, p. 106.  
*cinerosus*, Bass. (*Cynips*) l. c. p. 110.  
*utriculus*, Bass. (*Cynips*) l. c. p. 78.  
*californicus*, Bass. (*Cynips*) l. c. p. 51.  
*pomiformis*, Bass. (*Cynips*) l. c. p. 74.  
*Pattoni*, Bass. (*Cynips*) l. c. p. 98.  
*Coxii*, Bass. (*Cynips*) l. c. p. 112.  
*papula*, Bass. (*Cynips*) l. c. p. 107.  
*batatoides*, Ashm. (*Cynips*) Proc. Ent. Sec. 1881, p. xi.  
*foliatus*, Ashm. (*Cynips*) l. c. p. xiii.  
*lanigera*, Ashm. (*Cynips*) l. c. p. xiii.  
*Catesbæi*, Ashm. (*Cynips*) l. c. p. xv.  
*Turnerii*, Ashm. (*Cynips*) l. c. p. xvi.  
*rugosus*, Ashm. (*Cynips*) l. c. p. xviii.  
*medullæ*, Ashm. (*Cynips*) l. c. 1885, p. viii.  
*gemmarius*, Ashm. (*Cynips*) l. c. 1885, p. ix.  
*capsualus*, Ashm. (*Cynips*) l. c. 1885, p. ix.  
*virens*, Ashm. (*Cynips*) l. c. 1881, p. x.  
*succinipes*, Ashm. (*Cynips*) l. c. p. xi.  
*clavigerus*, Ashm. (*Cynips*) l. c. p. xxvii.  
*omnivorus*, Ashm. (*Cynips*) l. c. 1885, p. vi.  
*gibbosus*, Prov. Le Nat. Can. vol. xii, p. 232.  
*quinqueseptum*, n. sp.

#### CYNIPS, Linn.

*strobilana*, O. S. Proc. Ent. Soc. Phila. ii, p. 254; Bassett, l. c. vi, p. 690.  
*echinus*, O. S. Trans. Am. Ent. Soc. 1870, p. 56.

#### ACRASPID, Mayr.

*pezomachoides*, O. S. (*Teras*) l. c. ii, p. 250.  
*erinacei*, Walsh (*Teras*) l. c. ii, p. 483.

**BIORHIZA**, Westw.

- forticornis**, Walsh (*Cynips*) l. c. iii, p. 490; (*Teras*) O. S. l. c. iv, p. 379.  
**hirta**, Bass. (*Cynips*) l. c. iii, p. 688; (*Teras*) O. S. l. c. iv, p. 379.  
**fulvicollis**, Fitch (*Philonix*) Rep. No. 291; (*Teras*) O. S. l. c. p. 379.  
**nigricollis**, Fitch (*Philonix*) l. c. No. 292; (*Teras*) O. S. l. c. iv, p. 379.  
**nigra**, Fitch, Fifth Rep. No. 290.

**LOXAULIS**, Mayr.

- globulus**, Fitch (*Callaspidia*) Fifth Rep. No. 313; (*Cynips*) O. S. l. c. ante vol. i p. 67; Bassett, l. c. vol. ii, p. 328.  
**centricola**, O. S. (*Cynips*) l. c. vol. i, p. 58.  
**tenuicornis**, Bass. (*Cynips*) Can. Ent. vol. xiii, p. 92.  
**ficula**, Bass. (*Cynips*) l. c. xii, p. 75.  
**fiogera**, Ashm. (*Cynips*) Proc. Ent. Sec. 1885, p. vi.

**DRYOPHANTA**, Förster.

- gemmula**, Bass. (*Cynips*) Can. Ent. vol. xiii, p. 104.  
**nubila**, Bass. (*Cynips*) l. c. p. 56.  
**bella**, Bass. (*Cynips*), l. c. p. 56.  
**polita**, Bass. (*Cynips*) l. c. p. 56.  
**aquaticæ**, Ashm. (*Cynips*) Proc. Ent. Sec. 1881, p. xvi.  
**laurifoliæ**, Ashm. (*Cynips*) l. c. p. xvii.

**NEUROTERUS**, Hartig.

- batata**, Bass. (*Cynips*) Proc. Ent. Soc. Phila. iii, p. 684; Fitch Fifth Rep. No. 311.  
**noxiosus**, Bass. (*Cynips*) Can. Ent. xiii, p. 108.  
**vesiculus**, Bass. (*Cynips*) Proc. Ent. Soc. Phila. iii, p. 683.  
**irregularis**, O. S. (*Cynips*) l. c. i, p. 65.  
**verrucarum**, O. S. (*Cynips*) l. c. p. 62.  
**minutus**, Bass. (*Cynips*) Can. Ent. vol. xiii, p. 96.  
**flocosus**, Bass. (*Cynips*) l. c. p. 111.  
**affinis**, Bass. (*Cynips*) l. c. p. 103.  
**piger**, Bass. (*Cynips*) l. c. p. 105.  
**corrugis**, Bass. (*Cynips*) l. c. p. 109.  
**majalis**, Bass. (*Cynips*) Proc. Ent. Soc. Phila. iii, p. 683.  
**Rileyi**, Bass. (*Cynips*) Am. Nat. 1881, p. 149; Am. Ent. vol. iii, p. 153 (figure of gall).  
**crassitelus**, Prov. Le Nat. Can. vol. xii, p. 232.  
**minutissimus**, Ashm. (*Cynips*) Proc. Ent. Sec. 1885, p. vii.  
**confusus**, Ashm. (*Cynips*) l. c. 1881, p. xviii.  
**coniferus**, Ashm. (*Cynips*) l. c. p. xxvii.

The following species were characterized from the galls alone and their generic position is uncertain:

- Cynips pilulæ**, Walsh Proc. Ent. Soc. Phila. vol. iii, p. 481.  
**Cynips juglans**, Osten Sacken l. c. vol. ii, p. 256.  
**Cynips cicatricula**, Bassett Can. Ent. vol. xii, p. 105.

## Division II.—INQUILINÆ, or Guest gall-flies.

**PERICLISTIS**, Förster.

*sylvestris*, O. S. (*Aulax*) Proc. Ent. Soc. Phila. vol. iii, p. 37.

*pirata*, O. S. (*Aulax*) l. c. vol. i, p. 64.

*futilis*, O. S. (*Aulax*) l. c. vol. i, p. 64.

*semipiceus*, Harris (*Cynips*) Ins. Inj. Veg. p. 549.

**CEROPTRES**, Hartig.

*ficus*, Fitch (*Cynips*) Fifth Rep. No. 314.

*petiolicola*, O. S. (*Amblynotus*) l. c. vol. i, p. 67; vol. v, p. 380.

*Amblynotus ensiger* Walsh, l. c. vol. ii, p. 496.

*inermis*, Walsh (*Amblynotus*) l. c. vol. ii, p. 598; (*Ceroptres*) l. c. vol. v, p. 380.

*arbos*, Fitch (*Cynips*) Fifth Rep. No. 310.

*tuber*, Fitch (*Cynips*) l. c. No. 309.

*obtusilobæ*, n. sp.

*citriformis*, n. sp.

*pomiformis*, n. sp.

*virentis*, n. sp.

*succinipedis*, n. sp.

*lanigeræ*, n. sp.

*minutissimi*, n. sp.

*Catesbæi*, n. sp.

**SYNERGUS**, Hartig.

*lignicola*, O. S. Proc. Ent. Soc. vol. ii, p. 252; *rhodtiformis* Walsh l. c. p. 499.

*oneratus*, Harris (*Cynips*) Ins. Inj. Veg. 3d ed. p. 548; Fitch Second Rep. No.

313; (*Synergus*) Osten Sacken l. c. ante vol. v, p. 380.

*læviventris*, O. S. (*Synophrus*) l. c. vol. i, p. 54; Walsh vol. ii, p. 494; (*Synergus*)

O. S. l. c. vol. v, p. 380.

*campanula*, O. S. l. c. vol. v, p. 376.

*dimorphus*, O. S. l. c. vol. v, p. 376.

*albipes*, Walsh (*Synophrus*) l. c. vol. ii, p. 496.

*medax*, Walsh l. c. vol. iv, p. 498.

*ficigeræ*, n. sp.

*coniferæ*, n. sp.

*batatoides*, n. sp.

*bicolor*, n. sp.

*medullæ*, n. sp.

*saphelitus*, Förster.

*gemmariaæ*, n. sp.

## Division III.—FIGITINÆ, or the Parasites.

**ALLOTRIA**, Westwood.

*avenæ*, Fitch Sixth Rep. etc. p. 841, N. Y. State Agr. Soc.

*tritici*, Fitch l. c. p. 841.

*lachni*, Ashm. n. sp. (Appendix)

? *polita*, Prov. Le Nat. Can. vol. xii, p. 239.\*

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\* This is an *Inquiline*; my specimen is too poor for identification.



**ANACHARIS**, Dalman.

*subcompressa*, Prov. (*Eucoila*) l. c. (ante) vol. xii, p. 237.

**ONYCHIA**, Dalman.

*quinquelineata*, Say (*Diplolepis*) LeConte's Ed. Say's Works vol. ii, p. 716;  
(*Figites*) Prov. Le Nat. Can. xii, p. 237.

*armata*, Say (*Diplolepis*) l. c. ii, p. 716; (*Figites*) Prov. l. c. xii, 238.

**EUCOILA**, Westwood.

*stigmata*, Say (*Figites*) l. c. ii, p. 718.

*Kleidotoma maculipennis*, Prov. l. c. xii, 237.

*impatiens*, Say (*Diplolepis*) l. c. ii, p. 716.

*Kleidotoma cupulifera* Prov. l. c. xii, 238.

*pedata*, Say (*Diplolepis*) l. c. ii, p. 717.

*mellipes*, Say (*Figites*) l. c. ii, p. 718.

*Kleidotoma minima* Prov. l. c. xii, p. 238.

**KLEIDOTOMA**, Westwood.

*vagabunda*, n. sp.

**FIGITES**, Latreille.

*impatiens*, Say l. c. ii, p. 718.

? *chinquapin*, Fitch Fifth Rep. No. 320.

**ÆGILIPS**, Halliday.

? *aciculatus*, Prov. l. c. (ante) vol. xii, p. 239.

? *obtusilobæ*, O. S. Proc. Ent. Soc. Phila. vol. i, p. 68.

**IBALIA**, Latreille.

*ensiger*, Norton l. c. vol. i, p. 200.

*anceps*, Say LeConte's Ed. Say's Works vol. i, p. 218.

*maculipennis*, Hald. Proc. Acad. Nat. Sci. vol. iii, p. 127.

*rufipes*, Cress. Proc. Ent. Sec. A. N. S. 1879, p. xvii.

*montana*, Cress. l. c. 1879, p. xvii.

The following species, recorded by Dr. Harris in his "Catalogue of Insects of Massachusetts," Amherst, 1835, are unknown to me and should probably be dropped; as I am informed, through the courtesy of Mr. Samuel Henshaw, Curator of Boston Society of Natural History, that they are but MS. names of Dr. Harris:

**DIPLOLEPES.**

*flagellatus*.

*impolita*.

*devius*.

*potentillæ*.

**FIGITES.**

*pini*.

*melisoma*.

**Summary.**

Psenidæ.....	121 species.
Inquilinæ.....	30 "
Figitinae .....	21 "
Total.....	172

## Descriptions of New Species.

**AMPHIBOLIPS** Reinh.**A. melanocera** Ashm.

*Galls*.—Greenish brown and yellowish green round, globular galls, issuing from bud axils of *Quercus aquatica*; they vary greatly in size from one-quarter to half an inch in diameter. The outer shell is very thin, and interiorly there is a central kernel held in place by some very thin hair-like filaments.

*Gall-fly*.—♂. Length .18-.20 inch. Head, antennæ and thorax black or brown-black, sparsely pubescent; head and thorax coarsely rugoso-punctate; antennæ 14-jointed, rather long; pleuræ coarsely rugose; scutellum rugose, bifoveolate; coxæ black, anterior and intermediate legs brown, tibiæ darker, feet paler; posterior legs black or brown-black; abdomen shining, red-brown; wings hyaline, veins dark, and a large brown blotch at base of radius with a pale centre.

This species resembles *Amphibolips citriformis* Ashm., but is easily distinguished by its dark antennæ and by the black posterior legs. The gall, too, is markedly different in shape, although constructed on the same plan as in that species.

Described from eight specimens bred in June.

**ANDRICUS** Hartig.**A. quereifoliæ** Ashm.

*Galls*.—Succulent, round gall on the leaves of *Quercus Catesbæi*, with a loose, whitish kernel; constructed in the same manner as *Dryophauta aquaticæ*, but much smaller in size.

*Gall-fly*.—♂. Length .07 inch. Black, shining; sparsely pubescent and microscopically scratched; antennæ 14-jointed, honey yellow at base, brownish towards tip; thorax smooth, parapsides distinct; scutellum rugose, pubescent; abdomen polished black, slightly compressed; legs honey yellow; wings hyaline, veins brownish.

The above is described from three bred specimens which issued from galls in May. The galls are rare, and the flies difficult to raise.

**A. quinqueseptum** Ashmead.

*Galls*.—Hard, globular galls on leaf petiole of *Quercus obtusiloba*, projecting equally above and below; rounded beneath, but above with a prominent projection or nipple. The gall at first is of a beautiful smooth, reddish brown, microscopically pubescent, but turns black with age. In diameter it measures one-quarter of an inch, and interiorly is divided into five longitudinal partitions, the fly living in the centre.

*Gall-fly*.—♂. Length .12 inch. Head and thorax brown, very finely punctured, sparsely pubescent, the pubescence being denser on the face; antennæ 14-jointed, yellowish, gradually thickening towards tip, third joint as long as one and two combined, following joints sub-equal, terminal joint very small; parap-

sides distinct, finely pubescent above, but much heavier pubescent at sides; scutellum coarsely rugoso-punctate, bifoveolate; mesopleuræ almost black, upper portion smooth and shining, lower longitudinally strigose; legs amber colored, hairy, middle and anterior coxæ black at base, posterior almost black, fringed with long hairs behind, a strong tibial spur on forelegs, hind femora blackish along the upper edges, with the tibiæ more or less infuscated; abdomen smooth, reddish brown, shining, segment of venter visible its whole length; wings hyaline, veins pale, tinged with yellow.

Described from twelve specimens bred in July.

### **CEROPTRES** Hartig.

#### **C. obtusilobæ** Ashmead.

♂. Length .15 inch. Uniform light reddish brown, pubescent; head finely punctate; thorax rather coarsely rugoso-punctate; antennæ 13-jointed; the abdomen is compressed, and the ovipositor projects considerably; posterior tibiæ and first tarsal joint dark brown; wings hyaline, with veins brown and somewhat thickened.

Described from two ♀ specimens bred from an unnamed gall on *Quercus obtusiloba*.

#### **C. citriformis** Ashmead.

Length .04-.08 inch. Color: shining brown-black; antennæ 15-jointed in ♂, 14-jointed in ♀, and of a light brown color; parapsides distinct; abdomen dark reddish brown, polished; legs uniform light yellowish; wings hyaline.

Described from numerous specimens bred in 1881 from gall *Amphibolips citriformis* Ashm. I notice this guest fly makes a pseudo-gall on the rind.

#### **C. pomiformis** Ashmead.

♂. Length .05 inch. Slender; head yellowish brown, with a dark brown blotch enclosing ocelli; eyes brown; antennæ 15-jointed, yellowish, with the apical third brown; thorax black, finely pubescent; abdomen bright yellowish brown, infuscated towards tip; wings hyaline, veins yellow, radial area closed, narrow.

This pretty little species is described from two specimens bred from gall *Andricus pomiformis* Bass., sent to me from California.

#### **C. virentis** Ashmead.

♀. Length .08 inch. Uniform yellowish brown; head and thorax finely punctured; eyes dark brown; antennæ 14-jointed, brownish towards tip; wings hyaline, veins pale yellowish.

Described from specimens bred in 1881 from gall *Andricus virens* Ashm.

#### **C. succinipedis** Ashmead.

Length .05-.07 inch. Brown-black, pubescent; antennæ 14-jointed in ♀, pale yellowish; abdomen shining black, more or less rufous at base and surrounding anus; wings hyaline, veins pale.

Described from specimens bred 1881 from gall *Andricus succinipes* Ashm.

**C. lanigeræ** Ashmead.

Length .08-.10 inch. Red-brown, punctate; eyes dark brown; antennæ 13-jointed, yellowish; mesoscutum infuscated along the anterior edge; abdomen darker along the sides; legs light reddish brown, with feet paler, and the posterior femora and tibiæ brown; wings hyaline, veins pale.

Described from specimens bred from gall *Andricus lanigera* Ashm. in 1881.

**C. minutissimi** Ashmead.

Length .04-.06 inch. Head and thorax dark brown or shining black, rugoso-punctate; antennæ long, 15-jointed in ♂, 13-jointed in ♀; yellowish, with slight reddish tinge, the apical joint is thickened and twice as long as the penultimate; legs honey yellow; abdomen black, shining; wings hyaline, veins yellow; the valve of the ovipositor is long and projects considerably above the upper surface of the abdomen.

Described from many specimens bred from gall *Neuroterus minutissimus* Ashm.

**C. Catesbaei** Ashmead.

Length .06-.08 inch. Black, shining, and resembles *minutissimi* very much, but, however, is readily distinguished from it by its much paler yellow colored antennæ and legs, coarser sculpture of the thorax and scutellum, and by the abdomen, which is testaceous at base and along the venter beneath.

Described from many specimens bred from gall *Andricus Catesbaei* Ashm.

**SYNERGUS** Hartig.**S. ficigeræ** Ashmead.

Length .08-.14 inch. Head and thorax reddish brown, punctate, the punctures coarser on thorax, slightly pubescent; antennæ 13-jointed in ♀, 15-jointed in ♂, yellowish; abdomen yellow, testaceous, with a large black blotch on disc; legs yellowish, posterior tibiæ brown along the upper edge; wings hyaline, veins brown.

This species approaches nearest to *S. lignicola* O. S., but is easily distinguished from it by its smaller size and brownish head and thorax.

Described from seven specimens bred from gall *Holcuspis ficigera* Ashm. in 1881.

**S. coniferæ** Ashmead.

Length .10 inch. Reddish brown, punctate and finely pubescent, the pubescence being quite thick on the face; antennæ 14-jointed, reaching to base of abdomen; thorax transversely wrinkled with parapsides distinct; abdomen at base testaceous; posterior femora and intermediate and posterior tibiæ along upper edges brown; wings hyaline, veins pale.

Described from numerous specimens bred from gall *Cynips conifera* Ashm.

**S. batatoides** Ashm.

Length .12-.14 inch. Head, antennæ and legs yellowish; head punctate with a brown blotch on vertex; antennæ short, 14-jointed in ♀, 15-jointed in ♂,

thorax and abdomen black, the latter polished, the thorax is coarsely punctate and finely pubescent; wings hyaline, veins brown.

Described from numerous specimens bred from gall *Andricus batatoides* Ashm. in 1881.

**S. bicolor** Ashmead.

Length .12-.14 inch. Head, thorax, antennæ and legs yellowish; thorax and head finely rugoso-punctate; a small brown blotch on vertex of head and a medial stripe on mesoscutum and along the hinder edges; antennæ 15-jointed in ♂, 13-jointed in ♀; abdomen polished black; wings hyaline, veins yellowish.

One ♀ is without the longitudinal medial stripe.

Described from several specimens bred from gall *Andricus foliatus* Ashm.

**S. medullæ** Ashmead.

Length .07-.16 inch, it varying greatly in size. Head and thorax coarsely rugoso-punctate; antennæ 15-jointed in ♀, 15-jointed in ♂, they with head and sides of collar yellowish; eyes and thorax brown; abdomen black, smooth and shining; wings hyaline, veins yellow.

Described from numerous specimens bred from gall *Andricus medullæ* Ashm.

Although this species varies greatly in size, there is a remarkable similarity in coloration.

**SAPHOLYTUS** Förster.

**S. gemmariae** Ashmead.

♂. Length .08 inch. Black, shining; head finely punctate, pubescent; antennæ 15-jointed, light brown, becoming darker towards tip; thorax with parapsides distinct and finely microscopically scratched; scutellum rugoso-punctate; abdomen black, polished; legs dark brown, excepting anterior tibiæ and tarsi which are lighter or reddish; wings hyaline, veins yellowish and the radial area is open.

Described from one ♂ specimen bred from gall *Andricus gemmaria* Ashm.

**ALLOTRIA** Westw.

**A. lachni** Ashmead.

Length .06-.10 inch. Black and lightly polished, with antennæ 15-jointed in ♂, 14-jointed in ♀; legs and antennæ yellow testaceous, with the tip of antennæ and posterior femora infuscated; the scutellum is rounded, smooth and convex, but with two small foveæ at base; wings hyaline.

**KLEIDOTOMA** Westw.

**K. vagabunda** Ashmead.

Length .17 inch. Slender, highly polished and of a dark wine red; antennæ 13-jointed, highly polished, very slightly pubescent and gradually thickening towards tip, joints three to seven sub-equal, following joints more or less moniliform, terminal joint fusiform, and one-third longer than the penultimate; thorax smooth, high, slightly compressed at sides; scutellum deeply excavated at base with two projections at sides, and an elevated tupuliferous disc; abdomen com-

pressed and obliquely truncate at tip, at base there is a longitudinally strigose rim; wings hyaline, with veins of a decided yellowish cast.

This beautiful species is described from a single specimen which lodged on my shoulder as I passed through a swamp, and is easily recognized from all others of this genus.

The Trees and Plants on which the North American CYNIPIDÆ are found, with a List of the Described Species found thereon.

THE OAKS (*Cupuliferæ*).

ENCENO OAK.

(*Quercus agrifolia*)

*Andricus pomiformis*, B.

*Callirhytis agrifoliæ*, B.

*Cynips echinus*, O. S.

WHITE OAK.

(*Quercus alba*)

*Acraspis pezomachoides*, O. S.

" *forticornis*, W.

*Andricus fusiformis*, O. S.

" *lana*, F.

" *utriculus*, B.

" *floci*, W.

*Callirhytis clavula*, B.

" *tuber*, F.

" *futilis*, O. S.

" *seminator*, H.

*Cynips juglans*, O. S.

" *cicatricula*, B.

" *pisum*, F.

*Holcaspis globulus*, F.

*Loxaulis mammula*, B.

*Neuroterus batatus*, B.

" *majalis*, B.

" *minutus*, B.

" *vesiculus*, B.

WATER OAK.

(*Quercus aquatica*)

*Dryophanta aquaticæ*, A.

*Andricus Turnerii*, A.

*Amphibolips melanocera*, A.

SWAMP WHITE OAK.

(*Quercus bicolor*)

*Andricus ignotus*, B.

*Callirhytis capsulus*, B.

*Cynips strobilana*, O. S.

*Neuroterus noxiosus*, B.

" *floccosus*, B.

BLACK JACK, or SCRUB OAK.

(*Quercus Catesbaei*)

*Andricus Catesbaei*, A.

" *omnivorus*, A.

" *capsualus*, A.

UPLAND WILLOW, or BLUE JACK OAK.

(*Quercus cinerea*)

*Amphibolips cinerea*, A.

*Andricus omnivorus*, A.

" *medullæ*, A.

" *gemmae*, A.

" *capsualus*, A.

SCARLET OAK.

(*Quercus coccinea*)

*Amphibolips coccineæ*, O. S.

" *nanus*, O. S.

*Andricus Osten Sackenii*, B.

LAUREL OAK.

(*Quercus laurifolia*)

*Amphibolips racemaria*, A.

" *citriformis*, A.

*Andricus rugosus*, A.

" *clavigerus*, A.

*Holcaspis fuliginosa*, A.

*Neuroterus confusus*, A.

" *coniferus*, A.

BURR OAK, OVERCUP OAK.

(*Quercus ficula*)

*Holcaspis ficula*, B.

## BLACK JACK OAK, BARREN OAK.

( *Quercus nigra* )

Callirhytis nigræ, O. S.

" operator, O. S.

" podagræ, W.

## PIN OAK, SWAMP SPANISH OAK.

( *Quercus palustris* )

Callirhytis cornigera, O. S.

" palustris, O. S.

" notha, O. S.

## WILLOW OAK.

( *Quercus phellos* )

Amphibolips phellos, O. S.

## CHESTNUT OAK.

( *Quercus castanea* )

Neuroterus Rileyi, B.

## HINDS' OAK.

( *Quercus Hindsii* )

Andricus californicus, B.

## MOUNTAIN CHESTNUT OAK.

( *Quercus montana* )

Andricus petiolicola, B.

Biorhiza, fulvicollis, F.

## OAK.

( *Quercus prinoides* ? )

Dryophanta gemmula, B.

Holcaspis rugosa, B.

Neuroterus affinis, B.

" corrugis, B.

## RED OAK.

( *Quercus rubra* )

Amphibolips nubilipennis, H.

" cœlebs, O. S.

" formosa, B.

" sculpta, B.

Andricus, singularis, B.

" confluens, B.

" papulus, B.

Callirhytis modesta, O. S.

" punctata, B.

Cynips pilulæ, W.

## POST OAK.

( *Quercus obtusiloba* )

Andricus tubicola, O. S.

" Pattoni, B.

" omnivorus, A.

Dryophanta polita, B.

Holcaspis, centricola, O. S.

Neuroterus verrucarum, O. S.

" irregularis, O. S.

## BLACK OAK, YELLOW BARKED OAK.

( *Quercus tinctoria* )

Amphibolips spongifica, O. S.

Andricus, papulus, B.

Callirhytis, tumifica, O. S.

" podagræ, W.

" scitula, B.

Neuroterus piger, B.

## OAK.

( *Quercus ilicifolia* )

Amphibolips ilicifolia, B.

Andricus Osten Sackenii, B.

" ventricosus, B.

Callirhytis similis, B.

## ON UNKNOWN OAKS.

Andricus cinerosus, B.

" Coxii, B.

Callirhytis Suttonii, B.

Dryophanta nubila, B.

" bella, B.

Holcaspis tenuicornis, B.

## POTATO.

( *Solanum tuberosum* )

Tribalia batatorum, W.

## THE ROSE.

( *Rosa carolina*, etc. )

Rhodites dichlocerus, H.

" bicolor, H.

" ignota, O. S.

" rosæ, L.

" radicum, O. S.

" verna, O. S.

## CINQUEFOIL.

( *Potentilla canadensis* )

Diastrophus radicum, B.

" turdigus, B.

" nebulosus, O. S.

" cuscuteformis, O. S.

## CATNIP.

( *Nepeta glechoma* )

Diastrophus similis, B.

## COMMON PLANT.

( *Lygodesmia juncea* )

Antistrophus pisum, W.

## ERRATA.

Page 251, line 14 from top, for West Indies, read United States.

“ 251, last line, for specimens, read species.

“ 252, line 3 from top, for specimens, read species.

“ 252, line 12 from top, for specimens, read species.

“ 252, line 13 from top, for specimens, read species.

“ 252, line 16 from top, for specimens, read species.

“ 254, line 13 from top, for vertum, read rectum.

“ 256, line 17 from bottom, for horns, read hooks.

“ 261, line 9 from bottom, for second segment, read third segment.

“ 271, line 21 from top, for pockets, read bags.

“ 273, line 6 from bottom, for distinct, read distant.

“ 297, line 8 from bottom, for **sapholitus**, read **SAPHOLYTUS**.